

## REMARKS/ARGUMENTS

The office action of January 15, 2010 has been carefully reviewed and these remarks are responsive thereto. Reconsideration and allowance of the instant application are respectfully requested.

### **Support for Claim Amendments**

Claim 49 is supported by the embodiments in the specification of the English translation of the international publication of the PCT application.

Claim 50 is supported by the contents in lines 15-22 on page 36 of the specification and the portions indicated by reference signs 12, 13, 17, 17-1 of Fig. 1 of the English translation of the international publication of the PCT application.

Claim 51 is supported by the content from line 27 on page 39 to line 7 on page 40 of the specification and the portions indicated by reference signs 45, 46 in Fig. 1 of the English translation of the international publication of the PCT application.

Claim 52 is supported by the content in lines 8-9 and 12-14 on page 40 of the specification and the portions indicated by reference signs 52 and 55 in Fig. 1 of the English translation of the international publication of the PCT application.

Claim 53 is supported by the content in lines 22-24 on page 46 of the specification and the portion indicated by the reference sign 106 in Fig. 2 of the English translation of the international publication of the PCT application.

Claim 54 is supported by the content in lines 1-8 on page 61 of the specification and the portions indicated by reference signs 211, 211D, 211E and 212 in Fig. 4 of the English translation of the international publication of the PCT application.

Claim 55 is supported by the content in lines 6-11 on page 74 of the specification and the portions indicated by reference signs 286, 288 and 289 in Fig. 6 of the English translation of the international publication of the PCT application.

Claim 56 is supported by the content in lines 9-10 and 17-18 on page 72 of the specification and the portions indicated by reference signs 262 and 263 in Fig. 6 of the English translation of the international publication of the PCT application.

Claim 57 is supported by the content on page 79 of the specification and the portions indicated by reference signs 319A and 319B in Fig. 7 of the English translation of the international publication of the PCT application.

Claim 58 is supported by the content from line 26 on page 110 to line 3 on page 111 of the specification and the portions indicated by the reference sign 506 in Fig. 10 of the English translation of the international publication of the PCT application.

Claim 59 is supported by the contents of the invention and the embodiments in the specification of the English translation of the international publication of the PCT application.

Claim 60 is supported by the contents of the invention and the embodiments in the specification of the English translation of the international publication of the PCT application.

**Objection to the Claims:**

Claims 32, 42 and 47 remain objected to for the use of the terms Yixue, Taiji, and Gua. The Office Action refers to MPEP 2141.03. This section of the MPEP has been reviewed by the undersigned. Nothing was found that supports the position asserted in the Office Action. For example, the following are quotes taken directly from MPEP 2141.03

The person of ordinary skill in the art is a hypothetical person who is presumed **to have known the relevant art** at the time of the invention. Factors that may be considered in determining the level of ordinary skill in the art may include: (A) "type of problems encountered in the art;" (B) "prior art solutions to those problems;" (C) "rapidity with which innovations are made;" (D) "sophistication of the technology; and" (E) **"educational level of active workers in the field."** In a given case, every factor may not be present, and one or more factors may predominate." (emphasis added)

The "hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity **have the capability of understanding the scientific and engineering principles applicable to the pertinent art.**" (emphasis added)

The relevant art for the terms Yixue, Taiji, and Gua is art relating to Chinese architecture.

The educational level of active workers in the field is the educational level necessary to be skilled in the art of Chinese architecture. The hypothetical person has the capability of understanding the scientific and engineering principles applicable to Chinese architecture.

Thus, one skilled in the art would be one skilled (educated) in the art of Chinese architecture. Many people in the United States study Chinese architecture and many are even experts in the field. Such would be the same for someone skilled in the art of classical architecture (columns etc.) or Spanish architecture (adobe roofs etc.) The relevant art of this application is the art including Chinese architecture. Further, the specification provides an explanation of these terms.

There is nothing in MPEP 2141.01 that states when the patent is being applied for in the United States, the language of the claims should be understandable to a person of ordinary skill in the art in the country of pending application. If this objection is maintained, support is requested for the objection as MPEP 2141.03 does not provide such support. Withdrawal of this objection is requested.

**Rejection under 35 U.S.C. § 101:**

Claims 21-46 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter, specifically the term “natural ecological structures.” The claims have been amended to recite a structure for plants, animals, and a water resource. Thus the claim contains structure elements and satisfies 35 USC 101. Withdrawal of this rejection is requested.

**Rejections under 35 U.S.C. § 102**

Claims 21-22, 32, 42-43 and 48 stand rejected under 35 U.S.C. 102(b) as being anticipated by Whitaker, Agricultural Buildings and Structures, or in the alternative under 35 U.S.C. 103(a) obvious over Whitaker, Agricultural Buildings and Structures in view of Placencia, U.S. 5, 862, 544 and Albers, U.S. Patent 4, 008, 689, further evidenced by the current state of zoos, botanical gardens, college campuses, plantations, and forms. This rejection is respectfully traversed.

**The Applicant's Arguments**

Applicant has provided the following comments for the Examiner's consideration:

**Independent claim 21**

It is noticed that it is mentioned by the examiner in the Office Action that “Whitaker (Agricultural Buildings and Structures(referred to as D1 hereinafter)) discloses...said one or more buildings have a tridimensional ecological structure (A TREE) and includes an aboveground part (see p. 9), an underground part, or both...; the tridimensional ecological structure of one or more buildings comprises a plurality of layers of ecological environment (streams, hills, trees, water cycle, nitrogen cycle),..., said structure...has a fixed type of organism cultivation device (a pot for a plant or a trellis for vines), said device being vertically developed or horizontally developed ”.

Firstly, in the examiner’s comments of this portion, it is incorrect for the examiner to consider that the “tree” is equivalent to the “tridimensional ecological structure” in claim 21. The “tridimensional ecological structure” in claim 21 does not indicate the plant or animal per se, but indicates the “tridimensional ecological architecture structure” providing space or place for growth of plants or animals, and thus is not the same as the “tree” as understood in the Office Action. Claim 21 is amended by the applicant to clarify this point. The rejection in the Office Action that the “tridimensional ecological structure” is disclosed by “tree” does not stand any more naturally.

Secondly, in the comments of this portion, it is further considered by the examiner that the feature “the tridimensional ecological structure of one or more buildings comprises a plurality of layers of ecological environment” in claim 21 is disclosed by the “streams, hills, trees, water cycle, nitrogen cycle”. The applicant believes that this is incorrect as well. As stated in the response to the previous Office Action, the “streams, hills, trees, water cycle, nitrogen cycle” on earth only constitute one layer of natural ecological environment. The natural environment on earth where natural resources are deficient and the land is limited cannot satisfy the requirements of the long-term living and development of human. However, according to the contents disclosed in the specification and the object of the instant invention, it can be understood that the “plurality of layers of ecological environment” in claim 21 is a plurality of layers of ecological environment that is to be provided by a plurality of layers ecological architecture structures constructed by human. The plurality of layers ecological architecture structures provides the plurality of layers of ecological environment, the number of which is several times larger than the sole layer of the natural ecological environment on earth. Each layer of the plurality of layers of the ecological environment provided by the plurality of layers of ecological architecture structures can include

one layer of “streams, hills, trees, water cycle, nitrogen cycle”. Accordingly, the plurality of layers of the ecological environment provided by the plurality of layers ecological architecture structures can accommodate a plurality of layers of “streams, hills, trees, water cycle, nitrogen cycle”. According to requirements of human’s surviving and development, the number of the layers of the plurality of layers of the ecological environment provided by the plurality of layers ecological architecture structures can be designed as large enough. Furthermore, the amended claim 21 recites the specific structural feature “plurality of layers ecological architecture structures” to define structural properties of the claimed multifunctional tridimensional combined ecological architecture. The technical feature regarding the plurality of layers of ecological architecture structures providing the plurality of layers of ecological environment in claim 21 presented in view of the problems of damaging of the natural environment, deficiency of natural resources and insufficiency of land neither is disclosed or taught by D1 (Whitaker), D2 (US5862544) and D3 (US4008689), nor is disclosed or taught by college campuses, plantations, farms, zoos and botanical gardens before the date of the instant invention, and cannot be readily conceived of by a person of ordinary skill in the art. This feature renders claim 21 be novel and be not obvious.

Thirdly, it is further noticed that it is recited in the previous claim 21 “said structure has a fixed type of organism cultivation device or a movable type of organism cultivation device, said fixed type of organism cultivation device or said movable type of organism cultivation device being vertically developed or horizontally developed”. It is mentioned by the examiner “Whitaker (Agricultural Buildings and Structures) discloses...said structure has a fixed type of organism cultivation device (a pot for a plant or a trellis for vines), said device being vertically developed or horizontally developed”. In other words, D1 does not disclose the technical feature “said structure has a movable type of organism cultivation device, said movable type of organism cultivation device being vertically developed or horizontally developed” in claim 21. Claim 21 has been amended by the applicant to include the following technical feature “said movable type of organism cultivation device comprises vertically developed space rotating cultivation frames for organisms or horizontally developed movable type of organism cultivation device; said space rotating cultivation frames for organisms are suspended, laid, piled, tridimensional, or shelved; said space rotating cultivation frames for organisms are provided inside, outside, or both inside and outside said buildings; said space rotating cultivation frames for organisms are provided singly or in combination; and said space rotating cultivation frames comprise a temperature regulating

mechanism, a water supply mechanism, or both a temperature regulating mechanism and a water supply mechanism”. Claim 21 recites the movable type of organism cultivation device in the form of space rotating cultivation frames for organisms, which are suspended, laid, piled, tridimensional, or shelved, which are provided inside, outside, or both inside and outside said buildings, which are provided singly or in combination, and which comprise a temperature regulating mechanism, a water supply mechanism, or both a temperature regulating mechanism and a water supply mechanism. Any feature of these contents can render claim 21 be distinguished from D1 (Whitaker) and possess novelty. Meanwhile, the tridimensional ecological architecture structure having therein a fixed type of organism cultivation device or a movable type of organism cultivation device, and comprising a plurality of layers of ecological architecture structures is not disclosed or taught by D2 (Placencia) and D3 (Albers), college campuses, plantations, farms, zoos and botanical gardens before the date of the instant invention either. The combination of the movable type of organism cultivation device and the tridimensional ecological architecture structure comprising a plurality of layers of ecological architecture structures will bring about very advantageous effect. In the case of the plurality of layers of ecological architecture structures, the organisms cultivated therein require sunlight and manual cultivation work or processing work. Providing the movable type of organism cultivation device into the building to facilitate the organism cultivation structure to be moved to the required place to get sunlight, be cultivated or processed etc. will make all the organisms in all layers in the plurality of layers of ecological architecture structures be in beneficial ecological environment and provide operability and convenience for the workers to carry out highly efficient cultivation work and processing work to the cultivated organisms in the building. As recited in the newly added dependent claims 50-55 and as recited in the previous claim 38, the movable type of organism cultivation device has various specific structure forms. Providing the movable type of organism cultivation device in various structural forms to the tridimensional ecological structure can make the plants and organisms cultivated in the organism cultivation device be able to move with the movement of the organism cultivation device, which provide extremely significant advantages. For instance, according to the additional technical feature of claim 50, several layers or several rows of movable organism cultivation boxes are suspended on the movable suspending rods, are transmitted by means of said movable suspending rods, said suspending chain rods and said transmission belt or chain. This can make the growth environment be adjusted, change the environment as required,

and make the organisms therein receive sunlight in turn and carry out a flow line cultivation or organism processing etc. (see lines 15-22 on page 36 of the specification and the portion indicated by reference signs 12, 13, 17, 17-1 of Fig. 1 of the English translation of international publication of the PCT application). The organism cultivation box with wheels mentioned in claim 51 is placed on the transmission device and can be transmitted thereby, so as to conduct the transportation and the flow line processing (see from line 27 on page 39 to line 7 on page 40 of the specification and the portion indicated by reference signs 45, 46 in Fig. 1 of the English translation of international publication of the PCT application). In claim 52, the movable organism cultivation box cooperates with the tracks to make the organism cultivation box move on the tracks, as required, to be outside the ecological chamber so as to make the organism therein receive sufficient sunlight (see lines 8-9 and 12-14 on page 40 of the specification and the portion indicated by reference signs 52 and 55 in Fig. 1 of the English translation of international publication of the PCT application). The movable warm house with bottom wheels in claim 53 can be applied in special environment and can be assembled and disassembled conveniently according to requirements (see lines 22-24 on page 46 of the specification and the portion indicated by the reference sign 106 in Fig. 2 of the English translation of international publication of the PCT application). In claim 54, the movable type of organism cultivation device comprises a tridimensional frame, a rotation transmission device, an ecological box for cultivation of plants and organisms and a suspended rod; and said ecological box is suspended by means of said suspended rod and can rotate with the rotation transmission device upward and downward the tridimensional frame, such that the position of the ecological box can be adjusted as required for the growth of the plants and organisms, and artificial cultivation and transportation and processing etc. (see lines 1-8 on page 61 of the specification and the portion indicated by reference signs 211, 211D, 211E and 212 in Fig. 4 of the English translation of international publication of the PCT application). The movable type of organism cultivation device in claim 55 comprises a plurality of organism plate boxes and a transmission belt device, and said transmission belt device can drive said plurality of organism plate boxes to move, such that the organism plate boxes can move to different positions according to requirements (see lines 6-11 on page 74 of the specification and the portion indicated by reference signs 286, 288 and 289 in Fig. 6 of the English translation of international publication of the PCT application).

As defined in these dependent claims, the tridimensional ecological architecture structure comprising a plurality of layers of ecological architecture structures and including the movable type of organism cultivation device in the preferred specific structure forms is not disclosed in D1 (Whitaker) and thus possesses novelty, and is not disclosed or taught by D2 (Placencia, U.S. 5, 862, 544), D3 (Albers, U.S. Patent 4, 008, 689) or college campuses, plantations, farms, zoos and botanical gardens before the date of the instant invention, and thus is not obvious over them.

In the Office Action, it is further mentioned by the examiner that the previous claim 21 includes the technical feature “said at least one building and systems combined in a manner of part of complete combination, and Whitaker at the least discloses the combination in part”.

The applicant disagrees with this view of the examiner due to the following reasons: The instant invention relates to an ecological system architecture combined by one or more buildings, wherein the ecological system is the subject matter, the ecological system and the architecture structure are combined to form the tridimensional ecological architecture devices having various functions, and the ecological architecture buildings therein can be selected optionally to be combined to achieve the beneficial effect of protecting ecological environment, promoting diversified development of organisms and maintaining sustainable development of humans, which are not disclosed by Whitaker’s Agricultural Buildings and Structures. The instant invention combines the buildings completely or partly into ecological villages or ecological towns, which highlights the subject matter of the ecological system which protects the ecological environment. The Whitaker’s Agricultural Buildings and Structures provided by the examiner, the plantations and the college campuses, farms before the instant invention cost and damage the ecological environment, and are substantively different from the multifunctional tridimensional combined ecological architecture devices of the instant invention. Actually, the present application is formed by combination of various ecological architecture structures, various functions and various cooperating devices. The combination type is one of the major functions of the present application, wherein the complete combination and the partial combination are extensions of the combined functions. It cannot emphasize only the complete combination and neglect the function of the partial combination. This is apparent. Thus it is necessary to retain the function that complete combination or partial combination can be made. The applicant disagrees with the examiner’s view that “Whitaker at the least discloses the combination in part” due to the following reasons:



The “part” mentioned by the examiner and the corresponding “part” in the present application are two completely different concepts and cannot be mentioned in the same breath. Each of the “part” mentioned by the examiner is a single structure of the Whitaker’s Agricultural Buildings and Structures (see the Contents of D1), the content corresponding to the “part” in the instant invention is a combined “part” in an ecological system of an ecological architecture and is an important combination part supporting the multifunctional tridimensional combined ecological architecture system. According to requirements of the ecological architecture engineering, selectively arranging and combining the ecological architecture structures and the ecological system in the multifunctional tridimensional combined ecological architecture and preferably providing various cooperating devices and equipments, so as to make the ecological effect of the ecological architecture be optimized and promote the retrieving and development of the ecological environment. The function of protecting environment is not possessed by D1 the Agricultural Buildings and Structures, plantations and farms provided by the examiner. It can be seen that it is incorrect for the examiner to deny novelty of the novel and inventive feature regarding the “partial combination” in the present invention, relying the conventional “part contents” in D1 the Agricultural Buildings and Structures, plantations and farms provided by the examiner. In addition, comparing the traditional each “part” provided by the examiner with each inventive combined “part” in the present application, it can be seen that the feature regarding the “part” in the present application possesses novelty. Examples are as follows:

Example 1: The “ventilation system” disclosed in Whitaker’s Agricultural Buildings and Structures as mentioned in the examiner’s comments is different from the “ventilation system” in the present application. Whitaker’s Agricultural Buildings and Structures discloses that the “ventilation system” therein indicates that ventilators are added into the agricultural buildings, the principle of which is that the ventilators exchange air outside the room and air inside the room, thus, the “ventilation system” disclosed by Whitaker is a traditional ventilation system (see explanations on pages 280, 282, 284, 287, 295 and 296 of D1) and is common knowledge. However, the “ventilation system” in the present application is an air system that can purify the air (see claim 22), and its prominent function is making the air and oxygen generated by the ecological system be used circularly within the devices. The openable and closable ecological house in the ecological system is an oxygen bar that can generate oxygen, and the oxygen generated by the plants and organisms in the ecological house can be transmitted by air passages of the “ventilation

system” into respective places in the building to be used by people and organisms therein. Meanwhile, the ecological house also can purify the air. It can be seen that the “ventilation system” in the ecological system is a part of the oxygen supply system. Under the circumstances that the outdoor air is not used, or the outdoor air is polluted seriously, the “ventilation system” in the multifunctional tridimensional combined ecological architecture can provide necessary and clean air for the devices. The multifunctional “ventilation system” possesses novelty over the “ventilation system” in D1 provided by the examiner. The examiner should not deny the novelty of the advanced “ventilation system” in the present application by an old “ventilation system”. Another example is as follows:

Example 2: It is mentioned by the examiner in the comments that “Whitaker discloses...said cooperating systems comprising at least a part of water recycling system...water recapture and treatment is known to persons of ordinary skill in the art, it would be obvious to a person of ordinary skill in the art at the time of the invention to use water recycling systems because water delivery and treatment from a central plant uses an excessive amount of energy that causes it to be comparatively inefficient and less economical than water recapture and treatment on location, as taught by Placencia, U.S. Patent 5862544”. D1 only discloses the “water system” on page 454 of D1, and said water system is only an “irrigation system”, which belongs to common knowledge. However, in the present application, the water recycling system, which is a multifunctional water supply system (see claim 22), comprises a precipitation gathering and purifying device, a sewage water recuperating and classification and purifying device, an external water resource input device, a device for filtering and purifying water from air, a sanitation device, a water reservoir device and a water supply device, by which the water supply system is managed and applied. The prominent property is arranging the combined function of the tridimensional ecological river and the water recycling system, and using the artificial rivers and lakes to reserve water sources to save the water sources. Even if in the place where water is deficient or a desert region, or in the drought period, a large quantity of water sources can also be nourished, which is a significant technical step for supporting the sustainable development of humans. It can be seen that the examiner’s mention of the “water irrigation system” in the Whitaker’s Agricultural Buildings and Structures and the “water recycling system” in the ecological system of the present application in the same breath is inappropriate. Similarly, denying the novelty of the “water recycling system” in the ecological system of the present application by the “water irrigation system” in the

Whitaker's *Agricultural Buildings and Structures* is incorrect. Furthermore, the device for recycling fresh water flow discharged from the shower head (12) disclosed by D2 (Placencia, U.S. Patent 5862544) also belongs to common knowledge, is completely different from the water recycling system in the present application, which will be further explained in details hereinafter.

Further, see example 3: in the Office Action the part of "at least discloses the combination in part", it is wrong for the examiner to use "electrical system" and "temperature and humidity regulating system" to reject the "power supply system" and "temperature and humidity regulating system" in the present application. "Electrical system" and "ventilation system" in reference *Agricultural Buildings & Structures* are traditional power supply and ventilation technologies in traditional agricultural buildings (see page 295), which belongs to common knowledge in the technical field. D1 mentions about electrical system on page 454, but without any description in detail, and also mentions a photovoltaic cell to convert sun light to electricity on chapter 14 page 249 without further explanations. However, "power supply system" and "temperature and humidity regulating system" in the present invention are systems using renewable green energy and being self-sufficient, wherein the "power supply system" generates, stores and supplies and uses electrical power by solar power, wind power and mechanical power (see claims 22, 28, 29 and 57). The ecological device in the present invention, movable type organism cultivation box and heating device and water supply device therein all use the green energy provided by the "power supply system". Therefore, it can be seen "power supply system" and "temperature and humidity regulating system" of the multifunctional tridimensional combined ecological architecture are energy-saving and environmental protecting high technologies of "green energy". The present invention can also generate, store and use electricity without any external power source. Thus it has novelty over "electrical system" and "temperature and humidity regulating system" in D1 *Agricultural Buildings & Structures*. Therefore, it is wrong for the examiner to use "electrical system" and "temperature and humidity regulating system" in D1 *Agricultural Buildings & Structures* to deprive the novelty of the "power supply system" and "temperature and humidity regulating system" in the present invention.

To sum up, the applicant compares example 1, "ventilation system", example 2 "water supply system" and example 3 "power supply system" in "multifunctional tridimensional combined ecological architecture" and "temperature and humidity regulating system" of the

present application with those in D1 *Agricultural Buildings & Structures*, and the result is as follows: though the examiner refers to “ventilation system”, “water supply system”, “electrical system” and “temperature and humidity regulating system” in D1 to compare with those in claim 1 of the present application, and emphasizes that D1 at least discloses “at least the combination in part”, however, such comparison as made by the examiner is inappropriate. The reasons are as follows:

1. D1 and claim 1 of the present application both have the title of “system...”, but they relate to different technical contents.

2. Each system in the present application has novelty over each system in D1.

3. Each system in the present application is a part of an advanced functional system combined with the ecological system. However, each system in D1 is traditional, well-known, single and outdated. They cannot be compared to each other.

4. Each system in the present application has the function of protecting natural environment. However, each system in D1 damages the natural environment.

5. It is wrong to use the outdated single system in D1 to deprive the ecological system and advanced system of the present invention of the novelty.

6. The ecological system in the present application is a tridimensional scientific system which protects environment, promotes the diversity of creatures and maintains the substantial development of mankind. The advanced function of such a scientific environmental protecting system cannot be found in D1 *Agricultural Buildings & Structures*, campus, farms and plantations.

7. The novelty of “...part of systems” in the present application is recorded with details in the description. It can be verified that “...part of systems” in the present application does possess novelty.

Therefore, it is wrong to use “...part of systems” or use each system in “...part of systems” to reject the novelty of the part of systems in the present application. We respectfully request the examiner to withdraw the statement “...at least discloses the combination in part”.

Further, even if according to the understanding of the examiner (obviously the understanding is incorrect), some of elements in previous claim 21 can be omitted. According to the disclosure of the description, especially to the object of the invention, the elements that could be omitted could only be part of the plural specific components included in “cooperating systems” and “an organism production system”. However, “cooperating systems” and “an organism production system” must be included and cannot be omitted. Further, the technical features of a plurality of layers of ecological architectural structures providing a plurality of layers of ecological environments cannot be omitted. Further, these technical features are not disclosed in D1 so that claim 21 possesses novelty. In addition, the combination of these technical features are neither disclosed nor suggested by D2, D3 or campus, plantation, farm, zoo or botanical garden before the present invention. Thus claim 21 is non-obvious with respect to them.

At the same time, the applicant wants to say that the feature “part or complete combination” does not mean that some of the elements in original claim 21 may not be claimed. The meaning of the technical feature is that the combining manners have two manners: completely combined or partly combined, but if partly combined, it should include all the elements in claims 21 without deleting any of them. No matter whether claim 21 defines a complete combination or a part combination, since all the elements mentioned in claims 21 must be included in the technical solutions defined in the claim, and D1 does not disclose all the elements, claim 21 possesses novelty. Further, even if according to the understanding of the examiner (obviously the understanding is incorrect), some of elements in original claim 21 can be omitted. According to the disclosure of the description, especially to the object of the invention, the technical features of a plurality of layers of ecological architectural structures providing a plurality of layers of ecological environments cannot be omitted. Further, these technical features are not disclosed in D1 so that claim 21 possesses novelty. In addition, these technical features are neither disclosed nor suggested by D2, D3 or campus, plantation, farm, zoo or botanical garden before the present invention. Thus claim 21 is non-obvious with respect to them.

Claim 21 has another feature of “combined”. As defined in claim 21, the multifunctional tridimensional combined ecological architecture “having one or more buildings, said one building or said more buildings comprising: a first ecological architecture structure for organisms, a second ecological architecture structure for plants, animals, and a water resource, a place for human

culture activity, an organism production system including organism cultivation devices, cooperating systems”. That is, with regard to buildings, the multifunctional tridimensional combined ecological architecture has two combining situations. One is that the multifunctional tridimensional combined ecological architecture only comprises one building; the other is that the multifunctional tridimensional combined ecological architecture comprises more buildings. No matter it contains one building or more buildings, a first ecological architecture structure for organisms, a second ecological architecture structure for plants, animals, and a water resource, an organism production system including organism cultivation devices, cooperating systems, and a place for human culture activity should be combined into one building or more buildings. That is, said one building has a plurality of structural components of various functions. Such a building is clearly distinguished from D1 in structural components. Further, for the situation with more buildings, said more buildings comprise at least one of the following ecological architecture structures: Taiji graphics type, Eight Gua graphics type, hood type, frame hood type, tree frame type, tridimensional land type, tridimensional awning type, combined frames type, turret frame type, combined passage type, hacienda type, ecological village type, ecological town type, tridimensional ecological river type, tridimensional ecological bridge type, tridimensional ecological road type, tridimensional ecological wall type and organism cultivation mechanical frame type. All these types of structures forms are clearly explained and presented in the description and attached drawings, and are different from the agricultural buildings disclosed by D1 *Agricultural Buildings & Structures*. The technical solution of claim 21 cannot be anticipated by D1 because of each specific type of structure form. This further enhances the novelty and non-obviousness of claim 21 in the situation in which more buildings are combined.

D1, traditional campus and farm referred to by the examiner do not disclose combining a first ecological architecture structure for organisms, a second ecological architecture structure for plants, animals, and a water resource, a place for human culture activity, an organism production system including organism cultivation devices, cooperating systems into one building or more buildings. For example, it can be seen from the table of contents in D1 *Agricultural Buildings & Structures* that D1 mainly includes two parts: The first part introduces the design of agricultural buildings and the materials for constructing agricultural buildings (see table of contents in D1), wherein, chapters 14-16 respectively relate to heat transfer, solar energy, air, moisture and temperature relationships, and ventilation of agricultural buildings. The second part introduces

houses and devices for specific industries. For example, chapter 18 relates to housing for dairy cattle; chapter 19 relates to housing for livestock; chapter 20 relates to poultry housing; chapter 21 relates to greenhouses; chapter 22 relates to fruit, vegetable and nursery storage. All of these belong to traditional agriculture buildings. In a traditional farm, even it includes housings or facilities for different specific industries listed in the second part of D1, however, these housings in specific industries are not combined, but separate from each other. D1, traditional campus and farm do not disclose features of claim 1: i.e. to combine a first ecological architecture structure for organisms, a second ecological architecture structure for plants, organisms and a water source, an organism production system comprising organism cultivation device, a place for human culture activity, and cooperating systems together in at least one buildings.

D1, traditional campus and farm do not disclose multiple types of structure forms of said more buildings mentioned in claim 1. This also constitutes a difference from D1, traditional campus and farm and buildings.

In addition, the applicant also notices that the examiner mentions “Whitaker discloses...said cooperating system comprising a water recycling system (plants inherently perform these functions, furthermore, examiner takes official notice that water recapture and treatment is known to persons of ordinary skill in the art; it would have been obvious to a person of ordinary skill in the art at the time of the invention to use water recycling systems because water delivery and treatment from a central plant uses an excessive amount of energy that causes it to be comparatively inefficient and less economical than water recapture and treatment on location, as taught by Placencia, U.S. Patent 5, 862,544)” (see page 5 in office action). The applicant does not agree these opinions. The following parts are detailed explanations in combination with analysis with reference to D2.

D2 (US5862544) only discloses an apparatus for recapture of fresh water flow released from a shower head (12) (see abstract of D2). The invention disclosed by D2 is to provide an easy to use fresh water recapture device which can divert, collect and store fresh water used in a period when the bather does not require the water, such as during water temperature adjustment or during shampooing (see col.1 lines 49-57 in D2). D2 does not relate to water cycle system on the spot as mentioned in previous claim 21, and does not belong to a water cycle system. The water cycle

system in previous claim 21 is not the same as the apparatus for recapture of idle shower water in D2. D2 only gives technical teachings of collecting idle shower water from a shower head, but does not relate to a water cycle system treating water on the spot. The point made by the examiner “it would have been obvious to a person of ordinary skill in the art at the time of the invention to use water recycling systems because water delivery and treatment from a central plant uses an excessive amount of energy that causes it to be comparatively inefficient and less economical than water recapture and treatment on location, as taught by Placencia, U.S. Patent 5, 862,544” is incorrect. D2 does not give technical teachings of disposing water cycle system for treating water on the spot in a building with a plurality of layers of ecological architecture structure which provides a plurality of layers of ecological environment for treating and recycling water on the spot.

In the office action, the examiner also mentions “examiner takes official notice that if methane is contained and removed it is obvious to a person of ordinary skill in the art to store it in tanks because methane is a source of energy and as such, it is desirable to capture it for use, as taught by Albers, U.S. Patent 4,008, 689)” (see pages 5-6 in office action). The applicant does not agree to this opinion. The particular analysis is made with reference to D3.

D3 relates to waste treatment systems and more particularly to waste conversion facilities where animal waste is converted to methane gas and to fertilizer (see col.1 lines 7-11 in D3). However, the waste conversion facilities are located close to housing for livestock. The claims of the present application recite a methane system provided in buildings so as to satisfy the need of energy of the people living there. D3 does not disclose the concept of design of disposing conversion facilities in a building with a plurality of layers of ecological architecture structures which provide a plurality of layers of ecological environment as presented by the present application nor give the technical suggestions of such design.

Through analysis of D2 and D3, it is further shown that claim 21 possesses novelty and non-obviousness.

### **Dependent claims**

The following are analysis to dependent claims:



In case the independent claim 21 possesses novelty over D1 or campus, plantation, farm, zoo, and botanical garden before the present invention, and has non-obviousness over D1, D2 and D3 and campus, plantation, farm, zoo, and botanical garden before the present invention, the dependent claims possess novelty and involve non-obviousness.

#### **Claim 22**

D1 does not disclose all the additional technical features of claim 22.

#### **Claim 32**

The applicant has deleted “greenhouse” in claim 32. The amended claim 32 defines a plurality of types of combination forms of the more buildings. The combination forms are completely disclosed and explained in the description. However, D1 does not disclose any one of them. If the examiner still considers that D1 discloses the combination forms, please indicate specific place in D1 at which the specific combination forms are disclosed.

#### **Claim 42**

The applicant has deleted “greenhouse” in claim 42. The multiple structure types recited in amended claim 42 have clear meanings in the description. The tridimensional land type ecological architecture structure has a plurality of layers of tridimensional land to increase the total land area on earth by times. The tridimensional ecological river type ecological structure disposes an ecological river on the building and the ecological river provides support for cultivation of plants and animals. The tridimensional ecological wall type ecological structure includes cultivation structures for plants and animals. Taiji graphics type, Eight Gua graphics type ecological structure each have specific building arrangements; passage type ecological structure combines multiple passage type buildings and cultivates plants and animals therein; tree frame type ecological structure has a central building main body which occupies small land areas and an arm type suspended ecological house extending from the main body. This type provides large spaces for growing of plants and animals by only occupying small land areas. The ecological bridge type and ecological road type each include multiple layers. Further, cultivation structures for plants and animals are respectively disposed on bridge and on road. All these types of structures forms are

neither disclosed by D1, nor anticipated or suggested by D1, D2 and D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 43**

D1 only lists some single buildings that can be applied in agricultural industry, but does not disclose the concept of combining residential house, and places for offices, commerce, sports, culture, factories, schools, researches, storages, sanatorium, stations, and recreational places with cultivation structures for plants and animals to realize a multi-functional new type of building as defined in claim 43.

#### **Claim 48**

The tridimensional combined ecological architecture of the openable and closable type or combined type as defined in claim 48 are provided with an opening and closing structure comprising an ecological space for organisms and an opening and closing device. According to the disclosure of the description, it can be understood that the opening and closing structure and opening and closing device in claim 48 are provided to satisfy the demands of a plurality of layers of tridimensional ecological architecture structures and are used in combination with doors and windows. They are not doors and windows in traditional buildings.

#### **Claims 50-55**

The novelty of claims 50-55 has been proved by the comments hereinbefore, so that there is no need for the applicant to make further explanations here.

#### **Claim 56**

Claim 56 recites a tree frame type ecological building, and said tree frame type ecological building includes a main building body in the central position and a plurality of aerial long arm ecological buildings located at the outer periphery of the main body and connected to said main building body. The ecological building in this specific form has the advantage of occupying small land and multiplies the organism cultivation spaces (see the English translation of the international publication of PCT page 72 lines 10 and 18, parts indicated by reference signs 262 and 263 in

Fig.6). Claim 56 is neither disclosed by D1, nor anticipated or suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 57**

Claim 57 recites a new type technical solution. In this technical solution, said power generation device is mounted to a door or window of said one building or said buildings and generates power by rotation of said door or window (for example by human force) (see PCT page 79 lines 5-8, parts indicated by reference signs 319A and 319B in Fig.7). This technical solution is neither disclosed by D1, nor anticipated or suggested by D1, D2 and D3, campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 58**

The technical solution of claim 58 is: said one building or at least one of said buildings is a tridimensional ecological bridge; said tridimensional ecological bridge includes an upper layer bridge surface and a lower layer bridge surface; said upper layer bridge surface is provided with a light transmitting skylight window formed by transparent structures or transparent glasses to transmit light to the lower layer bridge surface (see the English translation of the international publication of the PCT application, page 110 the last three lines, part indicated by reference sign 506 in Fig.10). The technical solution according to this claim relates to a tridimensional ecological bridge comprising a plurality of layers of bridge surface, the upper layer bridge surface is provided with a sunlight transmitting skylight window so that the light is not blocked by the upper bridge surface so that the lower layer bridge will also have sunlight needed for the growing of plants. This technical solution is neither disclosed by D1, nor anticipated or suggested by D1, D2 and D3, campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 59**

Claim 59 defines the following technical solution: at least one building of said buildings includes the first ecological architecture structure for organisms, the second ecological architecture structure for plants, animals, and a water resource, a place for human culture activity, an organism production system and a cooperating system. That is to say, even in the case of more buildings, at least one building of said buildings, just as the situation of only one building is

included as mentioned in claim 21, includes the first ecological architecture structure for organisms, the second ecological architecture structure for plants, animals, and a water resource, a place for human culture activity, an organism production system and a cooperating system, i.e., one building has multiple structural components and multiple functions. This technical solution is neither disclosed by D1, nor anticipated or suggested by D1, D2 and D3, campus, plantations, farm, zoo, and botanical garden before the present invention.

### **Rejections Under 35 USC§ 103**

Claims 23-31, 33-41 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitaker, *Agricultural Buildings and Structures*.

### **The Applicant's Arguments**

Applicant has provided the following comments for the Examiner's consideration:

#### **Claim 21**

As analyzed when the applicant comments on the novelty, the applicant amends claim 21 to clarify its technical features of novelty over prior art.

Technical features “the tridimensional ecological architecture structure of said one building or said more buildings comprises a plurality of layers of ecological architecture structures providing a plurality of layers of ecological environment for growth of organisms” adopted in amended claim 21 for solving the problem of shortage of land area and natural sources are neither disclosed by “streams, hills, trees, water cycle and nitrogen cycle”, nor disclosed or suggested by D1, D2 (US5862544), D3 (US4008689), and campus, plantations, farm, zoo, and botanical garden before the present invention mentioned in this Office Action. It is not easy to be thought of by a person skilled in the art so that claim 21 possesses novelty and non-obviousness.

Claim 21 also has the following features: as mentioned above, a multifunctional tridimensional combined ecological architecture as defined in claim 21 includes two technical solutions. One is that the multifunctional tridimensional combined ecological architecture only

comprises one building, for this technical solution, one building includes multiple structural components of various functions, which is neither disclosed by D1, nor disclosed or suggested by campus, plantations, farm, zoo, and botanical garden before the present invention. Thus claim 21 possesses novelty and non-obviousness.

The examiner mentions in item 15 of the Office Action that “Note that a greenhouse, as disclosed in the prior art and VERY WELL KNOWN TO THE STATE OF THE ART, and a college campus, particularly with an agricultural department, include a structure (glass or plastic paneling and windows) for organisms, natural ecological structure (trees) and places capable of being used for human culture activity (i.e. praying, shaking hands, conversing about how well a plant grows under different conditions)”. The applicant deems that this understanding is incorrect. The first ecological architecture structure for organisms in amended claim 21 is not disclosed by glass or plastic paneling and windows. The correct understanding to claim 21 is that “the first ecological architecture structure for organisms” in this claim is for the cultivation and growth for organisms, which belongs to different concepts with glass or plastic paneling and windows. Technical feature “a natural ecological structure” in amended claim 21 is amended to “a second ecological architecture structure for plants, animals, and a water resource”, which is an ecological architecture structure including plants, animals, and a water resource, and has a totally different structure from trees. The examiner mentions human culture activities in the greenhouse or campus (i.e. praying, shaking hands, conversing about how well a plant grows under different conditions) and concludes that greenhouse and campus are places for human culture activity in claim 21. However, this point is incorrect too. Places for human culture activity in claim 21 is supported by the specific places in claim 43, i.e. places with specific functions such as residential house, and places for offices, commerce, sports, culture, factories, schools, researches, storages, sanatorium, stations, and recreational places. It is the creation of the present inventor to combine these places with specific functions with a plurality of layers of tridimensional ecological architecture structures for the cultivation of plants and animals. It is neither disclosed by D1, nor disclosed or suggested by D2, D3, and campus, plantations, farm, zoo, and botanical garden before the present invention. Therefore, claim 21 possesses novelty and non-obviousness when it comprises only one building.

The other technical solution is: a multifunctional tridimensional combined ecological architecture having more buildings, said buildings comprise at least one of ecological architecture structures of Taiji graphics type, Eight Gua graphics type, hood type, frame hood type, tree frame type, tridimensional land type, tridimensional awning type, combined frames type, turret frame type, combined passage type, hacienda type, ecological village type, ecological town type, tridimensional ecological river type, tridimensional ecological bridge type, tridimensional ecological road type, tridimensional ecological wall type and organism cultivation mechanical frame type. All the structures in these forms are clearly explained and indicated in the description and the attached drawings and they are different from agricultural architectures disclosed by D1. As mentioned above, the technical solution of claim 21 is neither anticipated by D1, nor disclosed or suggested by D2, D3, and campus, plantations, farm, zoo, and botanical garden before the present invention because of each specific structure. Therefore, the technical solution of claim 21 including more buildings also has non-obviousness.

Claim 21 with all the above technical features has realized its object of invention: to protect environment, to control desert and flood, to increase land sources, to increase ecological tridimensional space, to provide material wealth to human beings, to change the living method of human being to a new living method of tridimensional ecological life, and to solve the problem of substantial development. Claim 21 can realize this object. However, D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention cannot realize this object. Thus claim 21 is non-obvious with respect to D1, D2, D3 or campus, plantations, farm, zoo, and botanical garden before the present invention. No doubt claim 21 has non-obviousness.

With regard to the opinion of the examiner mentioned in items 12 and 14 that the claims are provided the broadest reasonable interpretation, the applicant deems that even if claim 21 is provided with the broadest reasonable interpretation, D1, D2, D3 or campus, plantations, farm, zoo, and botanical garden before the present invention do not disclose a multifunctional tridimensional combined ecological architecture with a plurality of layers of ecological architecture structures providing a plurality of layers of ecological environment for the growing of organisms, and one building including multiple structural components with different functions or more buildings respectively comprising specific type of tridimensional ecological structure forms. Therefore, claim 21 including these technical features are non-obvious.

### **Dependent claims**

The following are analysis of the non-obviousness of dependent claims over the prior art.

At first, in case independent claim 21 possesses non-obviousness over the prior art, its dependent claims obviously have non-obviousness.

The following are analysis to dependent claims respectively. Claims 22, 32, 38, 42, 43, 48 and 50-59 have been analyzed when the novelty is analyzed hereinbefore there is no need to provide additional comments.

#### **Claim 23**

Claim 23 recites that tridimensional ecological walls provided in part or in periphery of said one building or said more buildings; wherein the walls are fixed or movable or both and have plant and organism cultivation structures. According to claim 23, the multifunctional tridimensional combined ecological architecture comprises tridimensional ecological walls provided in part or in periphery of said one building or said more buildings; wherein the walls have plant and organism cultivation structures thereon. Thus it further strengthens the combination between ecological elements such as plants and animals and buildings with people moving within to enhance the multi-functions of the present invention and to make human beings live harmonious with plants and animals in natural environment. D1, D2, D3 or campus, plantations, farm, zoo, and botanical garden before the present invention do not disclose technical features in claim 23 and these technical features do not belong to traditional or common technical features. Therefore, claim 23 is non-obvious with respect to D1, D2, D3 or campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 24**

Claim 24 recites the following technical features: the device for filtering and purifying water from air comprises a blower, to introduce air into said devices for filtering and purifying water from air through the air inlet thereof, wherein moisture in the air is vaporized by heaters provided inside said devices for filtering and purifying water from air, and then the moisture is held by the water cooling and filtering and capturing devices, then the water is discharged out of the devices for filtering and purifying water via an outlet of a channel for discharging water, said devices for filtering and purifying water from air are in the form of passage type, upright-type, or

caged-type, or suspended-type, or air-conditioning-type. The claim provides a new type of purifying device, which purifies and collects water at the same time, and it is water saving. It is consistent with the object of the present invention. D1, D2, D3 or campus, plantations, farm, zoo, and botanical garden before the present invention do not disclose new devices for filtering and purifying water from air in claim 24.

#### **Claim 25**

Claim 25 provides a more completed cooperating system to make multifunctional tridimensional combined ecological architecture safer. It is hard to think of disposing such a modern intelligent control and safety system in farm disclosed by D1. Such an intelligent controlled and safety system and multifunctional tridimensional combined ecological architecture comprising multi layers of tridimensional ecological architectural structures providing a plurality of layers of environments for the growth of plants and animals are neither disclosed or suggested by D1, D2, and D3, campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 26**

Claim 26 recites technical features as follows: said buildings are connected with one another via roads, bridges, or both roads and bridges; the roads or bridges optionally including tridimensional roads and tridimensional bridges provided in stories. When buildings are connected by tridimensional roads and tridimensional bridges, they actually form a tridimensional ecological village or an ecological town, thus the technical effect of the present invention is enhanced. The tridimensional village or city can be applied in the desert zone, and the transportation between buildings is realized by ecological bridge or ecological road away from the fierce environment in desert. This design is neither disclosed nor inspired by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 27**

In the multifunctional tridimensional combined ecological architecture as defined in claim 27, said movable organism cultivation device has at least one of a movable organism cultivation structure, a movable cultivation frame for organism, a movable organism cultivation plate, or a



movable organism cultivation box, which are suspended, laid, piled, tridimensional, or shelved, and wherein a temperature regulating mechanism, a water supply mechanism, or both a temperature regulating mechanism and a water supply mechanism are provided inside said movable cultivation box. D1 (Whitaker), D2, D3 or campus, plantations, farm, zoo, and botanical garden before the present invention do not give the following technical teachings: vertically developed or horizontally developed movable organism cultivation device, having a movable organism cultivation structure, a movable cultivation frame for organism, a movable organism cultivation plate, or a movable organism cultivation box, which are suspended, laid, piled, tridimensional, or shelved singly or combined in the inside of the building or outside of the building or both inside and outside, and wherein a temperature regulating mechanism, a water supply mechanism, or both a temperature regulating mechanism and a water supply mechanism are provided inside said movable cultivation box. D1 at most mentions the use of benches on page 453. However, obviously benches are not space rotating organism cultivation frames. Therefore, D1 does not give technical teachings or imply the technical features in amended claim 27.

#### **Claim 28**

Claim 28 recites the power generation and storing device comprising at least one of a solar power generation and storing device, a wind power generation and storing device, a water power generation and storing device, and a mechanical power generation and storing device. These power generating devices are combined with ecological buildings for cultivation of plants and animals and places for living, producing and working of human beings to make the function of ecological buildings complete, to successfully convert an energy consuming building to an energy generating building. This conception is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 29**

In multifunctional tridimensional combined ecological architecture defined by claim 29, said solar power generation and storing devices composed by elements are combined with tridimensional ecological architecture providing a plurality of layers of ecological environment for growth of organisms and places for working and living of mankind (i.e. residential house, factories etc). It realizes the sufficient use of solar energy and to convert a traditional energy consuming

building to an energy generating building. This conception is neither disclosed nor inspired by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

### **Claim 30**

Claim 30 defines a movable building of the multifunctional tridimensional combined ecological architecture. It increases the convenience of application for the multifunctional tridimensional combined ecological architecture, so that it can be transferred to fierce environmental conditions (i.e. desert) after being constructed in the factory and to be combined to a multifunctional tridimensional combined ecological architecture. This conception is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

### **Claim 31**

Claim 31 further defines light refractive devices in the multifunctional tridimensional combined ecological architecture as fixed, movable with lights and are controllable by lights or manually. The conception of using refractive devices to lead light to inside of ecological buildings for the growth of plants and organisms is not disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

### **Claim 33**

According to claim 33, the multifunctional tridimensional combined ecological architectures combined in tridimensional land type are provided in stories, and comprise aboveground, underground, or both aboveground and underground, organism cultivation spaces, a natural ecological environment space and a human cultural place, and wherein said buildings are provided collectively or separately with a water storing system, a water supplying system, a methane utilizing device, a water purifying system, a power generation and supplying device and a lifting device, each of which systems or devices is provided separately or in combination with other systems or devices. The buildings combined in tridimensional land type are provided with water, electricity, gas and transporting devices for the growth of plants and animals and the existence of mankind. It satisfies needs of cultivating plants, organisms and living of mankind as well. This conception is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 34**

Claim 34 further defines buildings, which are combined in combined passage type of form and forming a specific structure. According to claim 34, the passages are provide therein with passages, which passages are provided inside and outside completely or partly with at least one of organism cultivation, transportation and human cultural and natural ecological environment structures, a water draining device, a water storing device and a power supplying device, each of which devices is provided separately or in combination with other devices. So it provides a new specific type of multifunctional tridimensional combined ecological architecture which is not disclosed nor inspired by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 35**

Claim 35 refers to claim 32. In the multifunctional tridimensional combined ecological architecture as defined, said buildings, which are combined in tridimensional ecological river type of form, are further limited to comprise collectively or separately exposed river type, hidden river type, awning type, inside, outside, or both inside and outside organism cultivation devices, a water purifying device, a water storing device, a water recycling device, a tridimensional ecological device, each of which devices is provided separately or in combination with other devices. To dispose different forms of tridimensional ecological river on combined buildings may provide water to plants, organisms and mankind in buildings to make the building as a coordinate ecological environment for mankind, plants and animals. This is a preferred technical solution of the present invention which is not disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 36**

The multifunction tridimensional combined ecological architecture of claim 36 further limits said buildings, which are combined in tridimensional ecological bridge type of form, to have bridge bodies which are provided in single story or stories and which are provided with inside, outside, or both inside and outside, the first ecological architecture structure for organisms, or the second ecological architecture structure for plants, animals, and a water resource, or both the first ecological architecture structure for organisms and the second ecological architecture structure for

plants, animals, and a water resource and the buildings which are combined in tridimensional ecological bridge type of form are provided in combination or separately . To provide the tridimensional ecological bridges in a plurality of stories, the present invention makes sufficient use of space and provides an ecological structure for plants, animals and water resource on the bridge body. This further enhances the harmony between mankind and ecological environment. The technical solution is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

### **Claim 37**

The multifunctional tridimensional combined ecological architecture according to claim 37 further defines said buildings, which are combined in tridimensional ecological road type of form, have a road structure of single story or stories aboveground, underground, or both aboveground and underground, which road structure is provided thereon in stories or sections with inside, outside, or both inside and outside, organism cultivation environment, human cultural and natural ecological environment structures, or both organism cultivation environment and human cultural and natural ecological environmental structures and is provided with a water draining device, a water storing device and a power supplying device, the devices of the buildings which are combined in tridimensional ecological road type of form are provided separately or in combination with other devices. The tridimensional ecological road is designed to include multi-stories and to provide organism cultivation environment and human cultural and natural ecological environmental structures thereon, according to the present invention. This makes fully use of space, protects environment and makes the most of the advantages of multifunctional tridimensional combined ecological architecture of the present invention. Technical features of claim 37 are neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

### **Claim 39**

The multifunctional tridimensional combined ecological architecture according to claim 39 is further defined so that said buildings, which are combined in tree frame type of form, have various forms, comprise building structures, an aerial warm house, inside, outside, or both inside and outside organism cultivation structures and a water storing and supplying device, and are

provided separately or in combination. Buildings combined in tree frame type of form occupy small land areas and protect the environment. The main architecture structure of buildings combined in tree frame type of form cover small areas, and the main architecture structure is disposed with aerial warm house to get full use of aerial space. Further, plants and organisms cultivated in aerial warm house can receive sunlight from different directions. The architecture structure can also be provided with water storing and supplying device to save water. Technical features of claim 39 are neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 40**

In the multifunctional tridimensional combined ecological architecture as defined in claim 40, said solar cell receiving plates and said light transmitting devices are assembled in combination or separately into a fixed or rotatable equipment with multiple functions, which equipment with multiple functions is upright type or desktop type and wherein the equipment can be used in combination with the building or separately. The rotatable solar cell receiving plates and said light transmitting devices may adjust along with the movement of the earth to follow sunlight so as to receive more sunlight and provide energy to human beings. However, it is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 41**

In the multifunctional tridimensional combined ecological architecture as defined in claim 41, said buildings have stories and said buildings are combined completely or partly into a tridimensional ecological village, a tridimensional ecological town, or both a tridimensional ecological village and a tridimensional ecological town. D1 (Whitaker), D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention do not teach or imply a village or town composed by combining multiple buildings in specific structural forms. D1 relates to different independent buildings, such as barns, silos, greenhouses, but not to an architectural structure having multiple buildings.

#### **Claim 44**

In the multifunctional tridimensional combined ecological architecture as defined in claim 44, the organism production system includes an underground ecological structure having a roof, a part or the entirety of which is transparent, openable and closable, or both transparent and openable and closable; the underground ecological structure comprises a single storey or multiple-storey of ecological structures or both a single story ecological structure and multiple-storey of ecological structures and is provided therein with solar energy device, light transmission device, or both solar energy device and light transmission device. The surface area on earth is basically fixed. Claim 44 gives a technical solution to develop the underground space and to introduce sunlight by light transmission device to underground ecological structure so as to satisfy the need of the growth of plants and organisms in the underground ecological structure or for the existence of mankind. The technical solution is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 45**

The multifunctional tridimensional combined ecological architecture as defined in claim 45 comprises underground ecological structure that comprises in turn a structure for cultivation of plants, a structure for cultivation of animals, or both a structure for cultivation of plants and a structure for cultivation of animals. So it is possible to get sufficient use of the underground space. The conception is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 46**

The multifunctional tridimensional combined ecological architecture as defined in claim 46 comprises a tridimensional land ecological device comprising a story or stories of tridimensional land and a layer of soil on original ground; wherein plants, animals, or both are cultivated on the story or stories of tridimensional lands; said tridimensional land ecological device is provided further therein with an agriculture machine. It will multiply the land area by times and solve the problem of insufficient land. The conception of tridimensional land is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 49**

In the multifunctional tridimensional combined ecological architecture as defined in claim 49, said first ecological architecture structure for organisms, said second ecological architecture structure for plants, animals, and a water resource, the place for human cultural activity, said organism production system and the cooperating systems are completely or partly or singly provided. This technical solution is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

#### **Claim 60**

In the multifunctional tridimensional combined ecological architecture as defined in claim 60, the Taiji graphics type ecological structure and the Eight Gua type ecological structure are provided in combination or singly. This technical solution is neither disclosed nor suggested by D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention.

After the above analysis, it can be seen that all the claims possess novelty and non-obviousness with respect to D1, D2, D3 and campus, plantations, farm, zoo, and botanical garden before the present invention. Therefore, withdrawal of the rejections to the claims is requested.

#### **CONCLUSION**

If any fees are required or if an overpayment is made, the Commissioner is authorized to debit or credit our Deposit Account No. 19-0733, accordingly.

All rejections having been addressed, applicants respectfully submit that the instant application is in condition for allowance, and respectfully solicit prompt notification of the same.

Respectfully submitted,  
BANNER & WITCOFF, LTD.

Dated: July 14, 2010

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